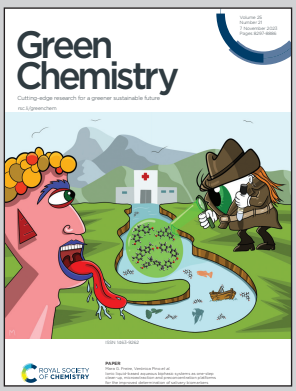
Showcasing research from Professor Hong Zhao's laboratory, Green Chemical Engineering Research Centre, Shanghai Advanced Research Institute, Chinese Academy of Sciences, Shanghai, China.

Reengineering of the carbon-to-acetylene process featuring negative carbon emission

With the increasingly serious environmental pollution, the greatest challenge in the field of chemical engineering is how to prepare various chemicals for human beings cleanly and efficiently. Here, the barium looping ($BaCO_3$-BaC_2-$Ba(OH)_2$-$BaCO_3$) has opened a new door for us to directly convert carbon, carbon dioxide, and water into acetylene and carbon monoxide, which are the key building blocks for chemical synthesis, in a simpler, greener, and more efficient way.

As featured in:



See Hong Zhao, Biao Jiang *et al.*, *Green Chem.*, 2023, **25**, 8584.

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